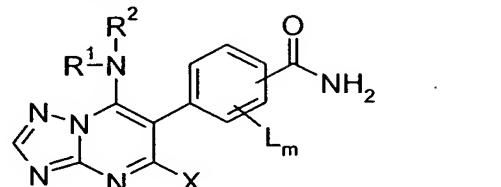


We claim:

1. A triazolopyrimidine of the formula I



5 in which the substituents are as defined below:

R¹, R² independently of one another are hydrogen, C₁-C₈-alkyl, C₁-C₈-haloalkyl, C₃-C₈-cycloalkyl, C₃-C₈-halocycloalkyl, C₂-C₈-alkenyl, C₂-C₈-haloalkenyl,
10 C₃-C₆-cycloalkenyl, C₃-C₆-halocycloalkenyl, C₂-C₈-alkynyl, C₂-C₈-haloalkynyl or phenyl, naphthyl or a five- or six-membered saturated, partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S,
15 R¹ and R² together with the nitrogen atom to which they are attached may also form a five- or six-membered heterocycl or heteroaryl which is attached via N and may contain one to three further heteroatoms from the group consisting of O, N and S as ring members and/or may carry one or more substituents from the group consisting of halogen, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₂-C₆-alkenyl, C₂-C₆-haloalkenyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₃-C₆-alkenyloxy, C₃-C₆-haloalkenyloxy, (exo)-C₁-C₆-alkylene and oxy-C₁-C₃-alkyleneoxy;
20

25 R¹ and/or R² may carry one to four identical or different groups R^a:
R^a is halogen, cyano, nitro, hydroxyl, C₁-C₆-alkyl, C₁-C₆-haloalkyl, C₁-C₆-alkylcarbonyl, C₃-C₆-cycloalkyl, C₁-C₆-alkoxy, C₁-C₆-haloalkoxy, C₁-C₆-alkoxycarbonyl, C₁-C₆-alkylthio, C₁-C₆-alkylamino, di-C₁-C₆-alkylamino, C₂-C₈-alkenyl, C₂-C₈-haloalkenyl, C₃-C₈-cycloalkenyl, C₂-C₆-alkenyloxy, C₃-C₆-haloalkenyloxy, C₂-C₆-alkynyl, C₂-C₆-haloalkynyl, C₃-C₆-alkynloxy, C₃-C₆-haloalkynloxy, C₃-C₆-cycloalkoxy, C₃-C₆-cycloalkenyloxy, oxy-C₁-C₃-alkyleneoxy, phenyl, naphthyl, a five- to ten-membered saturated, partially unsaturated or aromatic heterocycle which contains one to four heteroatoms from the group consisting of O, N and S,
35

where these aliphatic, alicyclic or aromatic groups for their part may be partially or fully halogenated or may carry one to three groups R^b:

5 R^b is halogen, cyano, nitro, hydroxyl, mercapto, amino, carboxyl, aminocarbonyl, aminothiocarbonyl, alkyl, haloalkyl, alkenyl, alkenyloxy, alkynyloxy, alkoxy, haloalkoxy, alkylthio, alkylamino, dialkylamino, formyl, alkylcarbonyl, alkylsulfonyl, alkylsulfoxyl, alkoxycarbonyl, alkylcarbonyloxy, alkylaminocarbonyl, dialkylaminocarbonyl, alkylaminothiocarbonyl, dialkylaminothiocarbonyl, where the alkyl groups in these radicals contain 1 to 6 carbon atoms and the abovementioned alkenyl or alkynyl groups in these radicals contain 2 to 8 carbon atoms;

10 and/or one to three of the following radicals:

15 cycloalkyl, cycloalkoxy, heterocyclyl, heterocyclyloxy, where the cyclic systems contain 3 to 10 ring members; aryl, aryloxy, arylothio, aryl-C₁-C₆-alkoxy, aryl-C₁-C₆-alkyl, hetaryl, hetaryloxy, hetarylthio, where the aryl radicals preferably contain 6 to 10 ring members and the hetaryl radicals 5 or 6 ring members, where the cyclic systems may be partially or fully halogenated or substituted by alkyl or haloalkyl groups;

20 L is halogen, cyano, C₁-C₆-alkyl, C₁-C₄-haloalkyl, C₁-C₆-alkoxy, C₃-C₆-alkenyloxy or C₁-C₄-alkoxycarbonyl;

25 m is 1, 2, 3 or 4, where the groups L may be different if m is greater than 1;

25 X is halogen, cyano, C₁-C₄-alkyl, C₁-C₄-haloalkyl, C₁-C₄-alkoxy or C₁-C₂-haloalkoxy.

30 2. The compound of the formula I as claimed in claim 1, in which R¹ is not hydrogen.

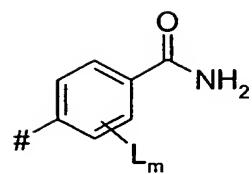
35 3. A compound of the formula I.A:

I.A

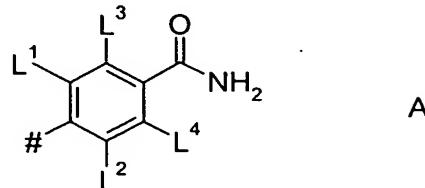
35 in which the variables are as defined in claim 1.

35 4. The compound of the formula I.A as claimed in claim 3 in which the phenyl group

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corresponds to the group A:



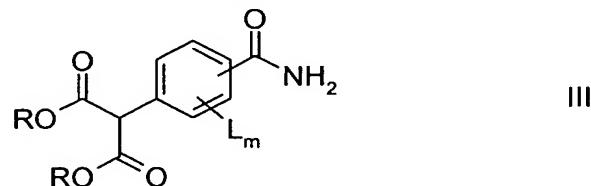
where

5 L^1 is halogen, halomethyl or C_1 - C_4 -alkyl;
 L^2, L^3, L^4 are hydrogen or halogen, C_1 - C_4 -alkyl, C_1 - C_2 -haloalkyl or
 C_1 - C_4 -alkoxy.

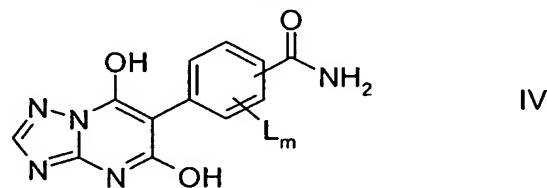
10 5. A process for preparing the compounds of the formula I as claimed in claim 1 in
 which X is halogen, cyano, C_1 - C_4 -alkyl, C_1 - C_4 -alkoxy or C_1 - C_2 -haloalkoxy, by
 reaction of 5-aminotriazole of the formula II



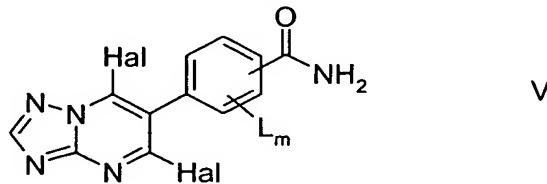
with phenymalonates of the formula III,



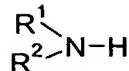
15 in which R is alkyl, with dihydroxytriazolopyrimidines of the formula IV,



halogenation to give the dihalo compounds of the formula V



and reaction of V with amines of the formula VI



VI

to give compounds of the formula I in which X is halogen, if desired, to prepare compounds I in which X is cyano, C₁-C₄-alkoxy or C₁-C₂-haloalkoxy, reaction of compounds I in which X is halogen with compounds of the formula VII,

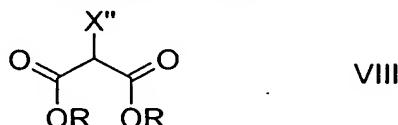
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M-X'

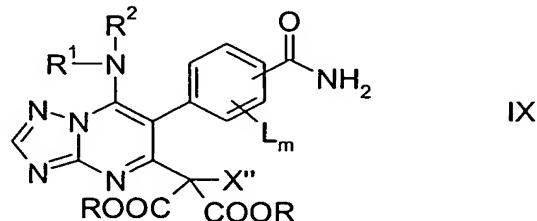
VII

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which, depending on the group X' to be introduced, are inorganic cyanides, alkoxides or haloalkoxides and in which M is an ammonium, tetraalkylammonium, alkali metal or alkaline earth metal cation, and, if desired, to prepare compounds of the formula I as claimed in claim 1 in which X is alkyl, by reaction of the compounds I in which X is halogen with malonates of the formula VIII,



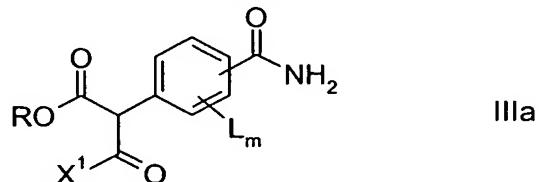
in which X" is hydrogen or C₁-C₃-alkyl and R is C₁-C₄-alkyl, to give compounds of the formula IX



15

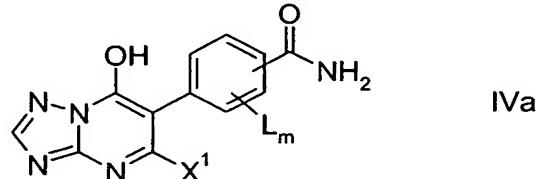
and decarboxylation to give compounds I in which X is alkyl.

6. A process for preparing the compounds of the formula I as claimed in claim 1 in which X is C₁-C₄-alkyl or C₁-C₄-haloalkyl, by reaction of 5-aminotriazole of the formula II as set forth in claim 5 with keto esters of the formula IIIa,



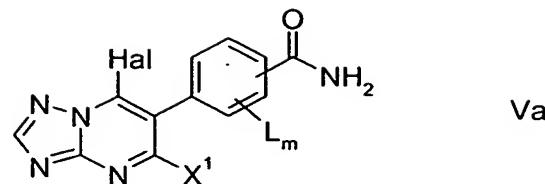
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in which X^1 is C_1 - C_4 -alkyl or C_1 - C_4 -haloalkyl and R is C_1 - C_4 -alkyl, to give 5-alkyl-7-hydroxy-6-phenyltriazolopyrimidines of the formula IVa



halogenation of IVa to give 7-halotriazolopyrimidines of the formula Va

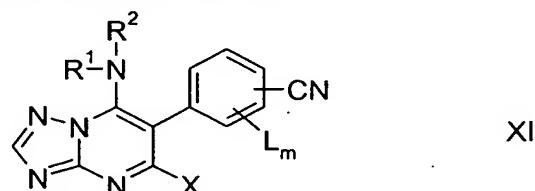
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and reaction of Va with amines of the formula VI as set forth in claim 5 to give compounds I in which X is C₁-C₄-alkyl or C₁-C₄-haloalkyl.

5 7. A compound of the formula IV, IVa, V or Va as set forth in claims 5 and 6.

8. A process for preparing compounds of the formula I as claimed in claim 1 by reacting 6-cyanophenyltriazolopyrimidines of the formula XI



10 in the presence of sulfuric acid or in a polyethylene glycol/NaOH system or with urea/hydrogen peroxide.

9. A fungicidal composition, comprising a solid or liquid carrier and a compound of the formula I as claimed in claim 1.

15 10. Seed, comprising 1 to 1000 g of a compound of the formula I as claimed in claim 1 per 100 kg.

20 11. A method for controlling phytopathogenic harmful fungi, which method comprises treating the fungi or the materials, plants, the soil or seed to be protected against fungal attack with an effective amount of a compound of the formula I as claimed in claim 1.